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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/491,994	01/26/2000	Curtis Gregory Kelsay	10990356-1	9325

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EXAMINER

WILLIAMS, KEVIN D

ART UNIT PAPER NUMBER

2854

DATE MAILED: 04/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/491,994

Applicant(s)

KELSA, CURTIS GREGORY

Examiner

Kevin D. Williams

Art Unit

2854

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-23, 28, 29, 33-39 and 41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-23, 28, 29, 33-39 and 41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 20-23, 25-29, 33-39, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuji (US 5,796,890) in view of Pressler (US 6,005,700), Sedlmayr (US 6,034,818), and Kawakami (US 5,848,203).

Tsuji teaches a device adapted to optically exchange information between an optical transducer adapted to transmit and receive information optically and an optical data port comprising a transmit fiber optic 41a adapted to optically transmit information optically transmitted by the optical transducer 20,21 (col. 8, lines 46-52) from the optical transducer to the optical data port (noted in Fig. 1), a receive fiber cable 41b adapted to optically receive information via the optical data port and optically transmit the received information to the optical transducer 20,21 (col. 8, lines 46-52), a first end (near 51b) of the transmit fiber optic 41a being adapted to be optically coupled to the optical transducer and a second end (near 51a) of the transmit fiber cable being adapted to provide a portion of the optical data port (noted in Fig. 1), a first end (near 51d) of the receive fiber cable 41b being adapted to be optically coupled to the optical transducer 20,21 and a second end (near 51c) of the receive fiber cable 41b being adapted to

provide a portion of the optical data port (noted in Fig. 1), the fiber cable providing bi-directional communication between the optical transducer and the optical data port, the optical transducer including a receive portion and a transmit portion.

Tsuji does not teach a transmit light pipe and a receive light pipe, a first lens of the transmit light pipe, first and second lens of the receive light pipe where the lenses are formed as part of the light pipes, a second lens of the transmit pipe for increasing an angle of and diverging light exiting the optical data, an optical interlink for exchanging information for a printer, where the transducer and the light pipe are disposed within a printer and where the light pipe is adapted to optically exchange information with the optical transducer and externally of the printer, and an infrared transducer.

Pressler teaches that light pipes and fiber optic cables are interchangeable light transfer mediums (col. 2, lines 8-10).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the fiber optic cables of Tsuji to be light pipes, because light pipes and fiber optic cables function equally as well in transferring light as taught by Pressler.

Sedlmayr teaches a light pipe 75 having a first lens 45 and a second lens 71 being formed as part of the pipe. Sedlmayr provides the lens 45 and the lens 71 to collimate the light being transmitted (Fig. 27A).

In view of the teaching of Sedlmayr to provide lens at each end of the pipe for the purpose of collimating light entering and leaving the pipe it would have been obvious to one having ordinary skill in the art to additionally modify Tsuji to have the lens as taught

by Sedlmayr at both ends of the receive pipe and at the first end of the transmit pipe, in order to collimate light entering and leaving the pipes.

Kawakami teaches a lens 27A for increasing an angle of transmitted light (col. 2, lines 39-43) and it would have been obvious to one having ordinary skill in the art at the time of the invention to additionally modify Tsuji to have the lens as taught by Kawakami, in order to increase the angle of the light exiting the data port so that the light may be more easily received by another device.

Pressler teaches an optical interlink for exchanging information for a peripheral device for a computer, where the transducer and the light pipe are disposed within the peripheral device and where the light pipe is adapted to optically exchange information with the optical transducer and externally of the peripheral device.

As it is known that a printer is a commonly used peripheral device for a computer, it would have been obvious to one having ordinary skill in the art to modify Tsuji to have the optical interlink in a printer in order to have the convenience of optically transmitting print jobs.

Sedlmayr teaches the conventionality of transmitting infrared light (col. 17, lines 39-41).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have an infrared transducer as a mere design alternative in the type of light desired to be transmitted.

Response to Arguments

3. Applicant's arguments filed 1/29/2003 have been fully considered but they are not persuasive.

Applicant argues that optical fiber 41a and control station 10 of Tsuji do not constitute a transmit light pipe nor an optical data port, respectively, since light which passes through optical fiber 41a is not exited from the control station 10.

First, the examiner relies on Pressler as a secondary reference with primary reference Tsuji for the teaching of a transmit light pipe, not Tsuji alone. Second, the examiner relies on the outer surface (as noted in Fig. 1 of Tsuji) of control station 10 as a teaching of a data port. Light which passes through fiber 41a does enter and exit the outer surface of control station 10. This is much like applicant's invention where the data port 64 is on the surface of a printer and the light which enters the data port does not exit the entire printer. Also, applicant, on page 6 (claim objections) of paper No. 16 has indicated that he does not intend to positively claim the data port or the optical transducer. Therefore, even though the outer surface of control station 10 is clearly a data port and identical to applicant's data port and the fibers 41a and 41b are certainly capable of transmitting and receiving optical information to and from a data port, it is not a required limitation in the claim.

Applicant also argues that combining Kawakami with Tsuji would render the Tsuji system inoperative. Applicant claims that modifying Tsuji with a lens to diverge light as taught by Kawakami would result in light passing through fiber 41a and not being coupled with light splitter 133. The examiner contends that the Kawakami lens would

only make it easier for the light to be coupled to the light splitter 133, because the resulting light beam would be several parallel beams covering a greater area. The lens 27A of Kawakami diverges a light beam and makes it several parallel beams. The angle of this divergence is variable depending on the lens. In Kawakami, the lens 27A was chosen so that the angle of the light passing through it would be large enough so that the light would not enter a fiber on the other side of the lens that was emitting light in the opposite direction. The result is that the parallel beams pass around the emitting fiber and are coupled with another device.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin D. Williams whose telephone number is (703)

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305-3036. The examiner can normally be reached on Monday - Friday, 8:30am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew H. Hirshfeld can be reached on (703) 305-6619. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

KDW
March 26, 2003

Leslie Evanisko
LESLIE J. EVANISKO
PRIMARY EXAMINER